

REMARKS/ARGUMENTS

The outstanding Final Office Action rejects claims 1-19 on various grounds over three applied references. **Claim 16 is amended** to further clarify the subject matter regarded as the invention. Claim 19 is cancelled without prejudice. New **Claims 20-22** are added. **Claims 1-18 and 20-22 are now pending** in this application

Rejection Under 35 U.S.C. § 102

Claims 1-3 and 5-10 have been rejected under 35 U.S.C. § 102(b) as being anticipated by *White et al.* (USPN 3,915,317 hereinafter "*White*")

The claimed invention is distinctly different from the cited combination of references in several ways. The applicants will explain as follows.

Claims 1-3 and 6-10 claim a wafer stacking apparatus reciting the elements of "a housing", "a transfer guide proximate to the housing, the transfer guide configured to facilitate the transfer of the plurality of semiconductor wafers into the housing" and "a member" collecting "the semiconductor wafers into a stack".

The applicants make reference to Fig 1 of the present invention to point out some distinctions between the claims and the cited art. The housing 20 is filled with wafers 30. The transfer guide 60 is arranged at the side of the housing 20. The guide 60 is positioned at the side of the housing 20 to enable wafers from cassette 50 to be slid through the guide 60 into the housing 20. In the depicted embodiment, transfer arm 70 shoves the wafers across the guide 50 into the housing. The member (basket 80 and lift 90) push up through the housing 20 neatly collecting wafers 20 into a stack as it is elevated.

Although it is not clear from the Action, the applicants understand the Argument to be that *White* teaches a housing 22, a member 40, and supports 42. On the contrary, *White* actually teaches a "chute 22" arranged to collect stamp cut "articles 12" pushed into the chute 22 from above by a piston "block 24". Additionally, member 40 is actually an "elevator arm 40" arranged to lower articles 12 from the chute 22 after it is full. *White* further includes "transfer facing 42" configured to hold up the articles 12. Additionally, the facing 42 of *White* is not like the supports of the present invention. For example, *White* specifically discloses that the facing prevents the articles from being moved upward by the downwardly inclined facing 42 (*White* at 3:48-51). This is exactly the

opposite of the claimed invention which embodiments are depicted with the wafers being pushed upwards as they are stacked. Thus, the cited art teaches strongly against the claimed invention.

However, most importantly, the applicants point out that nothing in the Action is offered as teaching "a transfer guide" as claimed. More specifically, nothing in the Action or cited portions of the art teach a "transfer guide configured to facilitate the transfer of the plurality of semiconductor wafers into the housing". Absent a teaching of the transfer guide, the cited art has failed to establish a *prima facie* case for anticipation. Accordingly, applicants submit that the cited art fails to teach all claim elements and therefore is insufficient to establish a rejection under 35 U.S.C. § 102. Accordingly, the applicants respectfully request that this ground of rejection be withdrawn as the Claim 1 and the claims depending therefrom (Claims 2, 3, 6, 7, and 8-10).

These dependent claims overcome the cited art for other reasons as well so will not be discussed in detail here. However, a few examples are provided.

As for **Claim 5**, the Action offers that 40 comprises a transfer arm. Although not clear, the Applicants presume that the Action means that arm 40 refers to the "transfer arm for directing the plurality of wafers through the transfer guide and into the housing" of **Claim 5**. A close reading of *White* reveals that 40 is just a portion of previously described chute 22 (See, *White* at 3:12-62). Alternatively, (although unclear) the receiving arms 40 are more akin to the basket 80 of the present invention. However, in neither case do the receiving arms 40 comprise "a transfer arm for directing the plurality of wafers through the transfer guide and into the housing" as required by Claim 5. This is of course made even more problematic by the fact that *White* does not teach a transfer guide. Accordingly, as to Claim 5, the cited art is missing two elements of the invention.

As for **Claim 8**, the Action offers that 28 teaches a basket. However, the language of Claim 8 actually recites "a basket configured to receive said plurality of semiconductor wafers, said basket further *configured to disengage said wafers from said supports, and to manipulate said wafers into a stack*" (emphasis added). This is not taught or suggested in *White*. *White* 28 teaches a flat platform (See, e.g., Fig. 1) capable only of receiving stacks of previously disengaged articles 12. In contrast, the basket and lift of the claimed invention actively "*disengage said wafers from said support*". The invention does this by passing upward through the housing to disengage the wafers from the supports, one by one, as the lift elevates the basket through the housing. Additionally, the claimed basket also is used "*to manipulate said wafers into a stack*". In contrast, the *White* "basket"

40 is a passive platform. The articles 12 have already been disengaged from the supports 42 by the piston 24 of punch 20. Thus, the "basket" 40 of *White* is merely a collection station and has no role in disengaging the wafers as claimed. All that the "basket" 40 does is convey a stack of articles 12 to the rotary slot 32 (See, *White* Fig 2). Accordingly, as to Claim 8, the cited art is also missing critical elements of the invention.

Accordingly, the applicants have pointed out certain distinctions between the claims and the cited art. The applicants respectfully submit that these distinctions are sufficient to distinguish these claims from the cited art. Therefore, Applicants respectfully submits that Claims 1-3 and 5-10 (and the claims depending therefrom) are patentable over the cited art and accordingly request that all rejections be withdrawn and the pending claims be allowed.

Rejections Under 35 U.S.C. § 103

Claims 16 and 17 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over *White*. Claims 16 and 17 are amended herein and will be discussed below.

Rejection of Claims 4, 11, 12, and 18:

Claims 4, 11, 12, and 18 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Publication to *White* in view of *Hardy* (USPN 2,407,782).

Referring now to Claim 4, the discussions previously mentioned above with respect to Claim 1 are particularly applicable. The applicants respectfully submit that *White* is an insufficient reference for the reasons discussed above. For example, none of the cited portions of *White* (e.g., arm 40) teach a transfer arm. Moreover, nothing taught in the cited portions of *Hardy* teach such a transfer arm either. Accordingly, the cited art fail to teach or suggest the limitations of a transfer arm. Moreover, *Hardy* is offered as teaching "pivotal supports". The flaw of this is that the *Hardy* supports are attached to a moving chain. They are not directly attached to the housing as is required by Claim 4. Moreover, there is no suggestion that the large shoes 13 used for stacking vegetables could be employed inside a housing used for stacking dental X-ray packets (as is the case in *White*). There is still less motivation for one of ordinary skill in the art in a semiconductor processing field to combine 60 and 30 year old patents in completely unrelated fields of endeavor.

Thus, it is fairly clear that the cited art fails to establish at least two elements of the invention

as to Claim 4. Accordingly, the cited art has failed to establish a *prima facie* case of obviousness. Additionally, the Action has failed to show a motivation to combine the references.

Referring now to Claims 11 & 12, the discussions previously mentioned above with respect to Claims 1 and 8 above are particularly applicable. The applicants respectfully submit that *White* is an insufficient reference for the reasons discussed above. For example, none of the cited portions of *White* (e.g., arm 40) teach a "a basket configured to receive said plurality of semiconductor wafers, said basket further configured to disengage said wafers from said supports, and to manipulate said wafers into a stack". Moreover, nothing taught in the cited portions of *Hardy* teach such a particularly configured basket either. Accordingly, the cited art fail to teach or suggest the limitations of a patentably distinct basket. Moreover, *Hardy* is also flawed in its teaching of "pivotal supports". The *Hardy* "pivotal supports" are attached to a moving chain. They are not directly attached to the housing as is required by Claim 8 (and therefore Claims 11 & 12). Moreover, there is no suggestion that the large shoes 13 used for stacking vegetables could be employed inside a housing used for stacking dental X-ray packets (as is the case in *White*). There is still less motivation for one of ordinary skill in the art in a semiconductor processing field to combine 60 and 30 year old patents in completely unrelated fields of endeavor.

Thus, it is fairly clear that the cited art fails to establish elements of the invention as to Claims 11 & 12. Accordingly, the cited art has failed to establish a *prima facie* case of obviousness. Additionally, the Action has failed to show a motivation to combine the references. Accordingly, the applicants respectfully submit that the cited art is insufficient to establish a *prima facie* case of obviousness as to Claims 4, 11, 12 for at least the foregoing reasons. Therefore, applicants respectfully request that the pending grounds for rejection be withdrawn as to these Claims.

The rejections of Claim 18 will be discussed below in conjunction with the discussions of amended Claims 16 and 17.

Rejection of Claims 13-15 and 19:

Claims 13-15 and 19 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Publication to *White* in view of *Hardy* and further in view of *Nichols* (USPN 5,735,662).

Referring first to **Claim 13**, the discussions previously mentioned above with respect to Claims 1 and 8 are particularly applicable. the discussions previously mentioned above with respect to Claims 1 and 8 above are particularly applicable. The applicants respectfully submit that *White* is an insufficient reference for the reasons discussed above. For example, none of the cited portions of *White* (e.g., arm 40) teach a "a basket configured to receive said plurality of semiconductor wafers, said basket further configured to disengage said wafers from said supports, and to manipulate said wafers into a stack". Moreover, nothing taught in the cited portions of *Hardy* teach such a particularly configured basket either. Accordingly, the cited art fail to teach or suggest the limitations of a patentably distinct basket. Moreover, *Hardy* is also flawed in its teaching of "pivotal supports". The *Hardy* "pivotal supports" are attached to a moving chain. They are not directly attached to the housing as is required by Claim 8 (and therefore Claims 13-15). Moreover, there is no suggestion that the large shoes 13 used for stacking vegetables could be employed inside a housing used for stacking dental X-ray packets (as is the case in *White*). There is still less motivation for one of ordinary skill in the art in a semiconductor processing field to combine 60 and 30 year old patents in completely unrelated fields of endeavor.

Additionally, the Action has failed to point out with the required specificity (See, 37 C. F. R. 1.104(c)(2)) the limitation of "a guide for facilitating the transfer of ... wafers into said housing and onto said supports".

Thus, it is fairly clear that the cited art fails to establish claimed elements of Claims 13-15 4. Accordingly, the cited art has failed to establish a *prima facie* case of obviousness. Additionally, the Action has failed to show a motivation to combine the references. Thus, it is fairly clear that the cited art fails to establish elements of the invention as to Claims 13-15 and therefore fails to establish a *prima facie* case of obviousness. Additionally, the Action has failed to show a motivation to combine the references. Accordingly, the applicants respectfully submit, for at least the foregoing reasons, that the pending grounds for rejection be withdrawn as to Claims 13-15.

Brief Summary of the Discussion of 103 Rejections

Accordingly, the applicants have pointed out and extensively argued for the patentable distinctions between the cited art and Claims 1 and 8. Claims 16-19 are amended and discussed below. Therefore, Applicants respectfully submit that independent Claims 1 and 8 (and the claims

depending therefrom) are patentable over the cited art and accordingly request that all rejections be withdrawn and the pending claims be allowed. Moreover, Claims 16-19 are discussed below.

Claims Subject to Amendment (16-19):

Claim 16 has been amended to recite “positioning a plurality of semiconductor wafers proximate to a housing, the housing having top and bottom openings and a side opening enabling ingress of wafers into the housing, the housing further including supports configured to releasably hold the plurality of semiconductor wafers”. No such limitation is present in the cited art. Additionally, the cited art does not teach “pushing the wafers through a transfer guide that directs the wafers through the side opening onto the supports so that the wafers are releasably held by the supports within the housing”. The applicants respectfully submit that the cited art does not include these limitations. Thus, these changes to Claim 16 are believed to render the claim patentable over the cited art. Accordingly, the applicants respectfully request that the pending rejection of Claim 16 be withdrawn.

As to dependent Claims 17, 18, and 19 all the same arguments apply. Each of these Claims are of course independently patentable, however supporting arguments need not be made at this time due to the underlying sufficiency of the arguments in support of base Claim 16.

New Claims:

Claims 20 & 21 clarify housing and lift details. Moreover, the underlying art is believed to be insufficient for the reasons discussed above with respect to base claim 1. As to Claim 22, it refers to a process step involving lift driven wafer disengagement. This is not taught in the cited art.

Conclusion:

In view of the foregoing amendments and remarks, it is respectfully submitted that the claimed invention as presently presented is patentable over the art of record and that this case is now in condition for allowance.


Accordingly, the applicants request withdrawal of all pending rejections and request reconsideration of the pending application and prompt passage to issuance. As an aside, the applicants clarify that any lack of response to any of the issues raised by the Examiner is not an admission by the applicant as to the accuracy of the Examiner's assertions with respect to such issues. Accordingly, applicant's specifically reserve the right to respond to such issues at a later time during the prosecution of the present application, should such a need arise.

As always, the Examiner is cordially invited to telephone the applicants representative to discuss any matters pertaining to this case. Should the Examiner wish to contact the undersigned for any reason, the telephone numbers set out below can be used.

Additionally, if any fees are due in connection with the filing of this Amendment, the Commissioner is authorized to deduct such fees from the undersigned's Deposit Account No. 50-0388 (Order No. NSC1P286).

Respectfully submitted,

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